

**REMARKS**

This Application has been carefully reviewed in light of the Final Office Action mailed January 31, 2007 ("Office Action"). Claims 1-5, 9, 10, 14-18, 22, 23 and 27-31 are pending in the application. The Examiner rejects Claims 1-5, 9, 10, 14-18, 22, 23 and 27-31. Applicant respectfully requests reconsideration and allowance of all pending claims.

**Section 112 Rejections**

In the present Office Action, the Examiner rejects Claim 1 under 35 U.S.C. § 112, second paragraph. The Examiner explained his rational for this rejection in the Office Action dated November 20, 2006. In that Office Action, the Examiner asserted that Claim 1 fails to particularly point out and distinctly claim the subject matter that Applicant regards as the invention. Applicant respectfully traverses this rejection for at least the following reasons. First, by reciting specific method steps, Claim 1 satisfies the definiteness requirements of 35 U.S.C. § 112, second paragraph. Second, the Examiner cannot maintain a rejection based on indefiniteness simply because the Examiner prefers a different mode of expression. Third, the rejection is improper because the Examiner confuses breadth with indefiniteness.

First, by reciting specific method steps, Claim 1 satisfies the definiteness requirements of 35 U.S.C. § 112, second paragraph. Claim 1 recites:

A method of processing a database service query, comprising:  
receiving a service query,  
obtaining a sum of terms associated with the service query by  
expanding at least one nested term into one or more un-nested terms,  
evaluating the sum of terms as a plurality of SQL instructions, wherein  
the sum of terms comprises one or more positive terms and one or more  
negative terms,  
determining a plurality of results associated with the sum of terms,  
wherein the determination comprises:  
collecting, into a first list, results associated with the one or  
more negative terms, and  
collecting, into a second list, results associated with the one or  
more positive terms while omitting from the second list any results that  
are in the first list.

In rejecting Claim 1, the Examiner quotes the following portion of Applicant's Specification:

It should be noted that a database that supports SQL may not supply a subtraction operator. In such instances a problem in processing the sum of terms as described above may arise. In order to process (or evaluate) a subtraction, the method according to the present application: collects all

positive terms in a list; collects all negative terms into another list; and then subtracts the positive term list and the negative term list whilst ignoring duplicates.

An alternative to the subtraction process noted above is to collect all negative terms in a list, and in the process of collecting all positive terms in another list, only keep the terms that are not in the negative list. As a result, this positive list will have the subtracted results.

(Specification; page 9, line 27 – page 10, line 6).<sup>1</sup> After quoting the foregoing portion of Applicant's Specification, the Examiner states:

Applicant has not disclosed what database does not supply subtraction. Whereas the applicant is claiming for all databases instead of a specific database. To expedite the prosecution, Applicant has been give [sic] a change [sic] to amend the claim to incorporate the specific database by combining the claim 4 with claim 1 and repeating the process for other claims.

(Office Action dated November 20, 2006; page 3).

The Examiner's assertion – that “applicant is claiming for all databases instead of a specific database” – is misleading. Rather than “claiming for all databases” as suggested by the Examiner, Claim 1 is directed to a method that comprise the specific steps recited in Claim 1. There is no dispute that the specific steps of Claim 1 are definite. Accordingly, Claim 1 satisfies the requirements of 35 U.S.C. § 112, second paragraph.

Second, the Examiner cannot maintain a rejection based on indefiniteness simply because the Examiner prefers a different mode of expression. It is well established that, “if the language used by applicant satisfies the statutory requirements of 35 U.S.C. 112, second paragraph, but the examiner merely wants the applicant to improve the clarity or precision of the language used, the claim must not be rejected under 35 U.S.C. 112, second paragraph.” MPEP § 2173.02. In this case, the Examiner suggested that Applicant amend Claim 1 to recite “receiving an X.500 or LDAP service query” rather than “receiving a service query.” (Office Action dated November 20, 2006; page 3). This suggestion shows that the Examiner merely prefers a different expression of the “service query” recited in Claim 1. Because the Examiner merely “prefers a different mode of expression...the claim must not be rejected under 35 U.S.C. 112, second paragraph.” MPEP § 2173.02.

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<sup>1</sup> In citing the foregoing portion of the specification, Applicant does not intend to limit any claims to any particular embodiment. Applicant merely quotes the particular portion of the specification quoted in the Office Action.

Third, the rejection is improper because the Examiner confuses breadth with indefiniteness. It is well established that:

Breadth of a claim is not to be equated with indefiniteness. *In re Miller*, 441 F.2d 689, 169 USPQ 597 (CCPA 1971). If the scope of the subject matter embraced by the claims is clear, and if applicants have not otherwise indicated that they intend the invention to be of a scope different from that defined in the claims, then the claims comply with 35 U.S.C. 112, second paragraph.

MPEP § 2173.04. As explained above, the Examiner suggests that Applicant amend Claim 1 to recite “receiving an X.500 or LDAP service query” rather than “receiving a service query.” (Office Action dated November 20, 2006; page 3). This suggestion is clearly based on breadth -- not indefiniteness. The mere breadth of a claim term does not establish indefiniteness. MPEP § 2173.04. Accordingly, the Office Action fails to properly establish a rejection under 35 U.S.C. § 112, second paragraph. The rejection of Claim 1 must therefore be withdrawn. For at least the foregoing reasons, Applicant respectfully requests reconsideration and allowance of Claim 1.

In rejecting Claims 9, 14, 22, and 31, the Examiner employs the same rationale used with respect to Claim 1. Accordingly, for at least the reasons stated above with respect to Claim 1, Applicant respectfully requests reconsideration and allowance of Claims 9, 14, 22, and 31.

### **Section 101 Rejections**

The Examiner rejects Claims 1-5, 9-10, 14-18, 22-23 and 27-31 under 35 U.S.C. § 101. The Examiner alleges that none of these claims are directed to statutory subject matter. Applicant traverses this rejection and respectfully requests reconsideration and allowance of Claims 1-5, 9-10, 14-18, 22-23 and 27-31.

The foregoing claims satisfy the requirements of 35 U.S.C. § 101. In the Office Action, the Examiner states:

The claims lack the necessary physical articles or objects to constitute a machine or manufacture within the meaning of 35 U.S.C. § 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category.

(Office Action; page 3). Thus, the Examiner asserts that the pending claims do not fall within a statutory category under 35 U.S.C. § 101. This assertion is incorrect. Each of the pending claims is directed to statutory subject matter. For example, Claim 1 recites:

A method of processing a database service query, comprising:  
receiving a service query,  
obtaining a sum of terms associated with the service query by expanding at  
least one nested term into one or more un-nested terms,  
evaluating the sum of terms as a plurality of SQL instructions, wherein the  
sum of terms comprises one or more positive terms and one or more negative terms,  
determining a plurality of results associated with the sum of terms, wherein  
the determination comprises:  
collecting, into a first list, results associated with the one or more  
negative terms, and  
collecting, into a second list, results associated with the one or more  
positive terms while omitting from the second list any results that are in the  
first list.

The Examiner's statement -- that the claims are "not a series of steps or acts to be a process" -  
- is clearly false. As illustrated above, Claim 1 recites the specific steps of "receiving a  
service query," "evaluating the sum of terms as a plurality of SQL instructions," and  
"determining a plurality of results associated with the sum of terms." Thus, Claim 1 is  
directed to a process, which is a statutory category enumerated by 35 U.S.C. § 101 ("any new  
and useful process, machine, manufacture, or composition of matter").

Not only do each of the claims fall within a statutory category, but each of the claims  
also satisfy the utility requirement of 35 U.S.C. § 101. Applicant reminds the Examiner that:

The question of whether a claim encompasses statutory subject matter should  
not focus on which of the four categories of subject matter a claim is directed  
to -- process, machine, manufacture, or composition of matter -- but rather on  
the essential characteristics of the subject matter, in particular, its practical  
utility.

*State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1375, 47  
USPQ2d 1596, 1602 (Fed. Cir. 1998). The Examiner does not dispute that the pending  
claims are directed to practical, useful, and concrete results. In addition, the Examiner does  
not dispute that the pending claims satisfy the utility requirement of 35 U.S.C. § 101.  
Accordingly, the Examiner's reasoning does not support the rejection of Claims 1-5, 9-10,  
14-18, 22-23 and 27-31 under 35 U.S.C. § 101. For at least these reasons, Applicant  
respectfully requests reconsideration and allowance of Claims 1-5, 9-10, 14-18, 22-23 and  
27-31.

### **Section 103 Rejections**

The Examiner rejects Claims 1-5, 9-10, 14-18, 22-23 and 27-31 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,356,892 B1 issued to Corn, et al. ("*Corn*"), in view of U.S. Patent No. 6,112,198 issued to Lohman, et al. ("*Lohman*"), and in view of U.S. Patent No. 5,412,804 issued to Krishna ("*Krishna*"). Applicant traverses this rejection and respectfully requests reconsideration and allowance of Claims 1-5, 9-10, 14-18, 22-23 and 27-31.

The cited references fail to support the rejection for several reasons. First, the cited references fail to teach, suggest, or disclose that the "determination comprises...collecting, into a first list, results associated with the one or more negative terms, and collecting, into a second list, results associated with the one or more positive terms" as recited in Claim 1. Second, the cited references fail to teach, suggest, or disclose "omitting from the second list any results that are in the first list" as recited in Claim 1. Third, the cited references fail to teach, suggest, or disclose "if the service query comprises a term having at least two NOT operators, deleting from the sum of terms a third-order term corresponding to the term having at least two NOT operators" as recited in Claim 31.

First, the cited references fail to teach, suggest, or disclose that the "determination comprises...collecting, into a first list, results associated with the one or more negative terms, and collecting, into a second list, results associated with the one or more positive terms" as recited in Claim 1. In the Office Action, the Examiner relies on *Corn* for this aspect of Claim 1. (Office Action; page 5). *Corn* teaches a method for re-writing LDAP queries as SQL queries. (Abstract). The cited portion of *Corn* describes merging sets of EIDs into an SQL query. (Column 7, lines 39-58). In particular, the cited portion of *Corn* states:

As described above, according to the inventive method, for each LDAP filter element or sub-expression, there is a set of entries (EIDs) that will satisfy the element. Thus, each element generally maps to a set of EIDs. The EID sets are then merged together, preferably into a single SQL query, using a set of combination rules. Thus, if a pair of LDAP filter elements are subject to an LDAP logical OR operator, the corresponding EID sets are merged using an SQL UNION logical operator. If a pair of LDAP filter elements are subject to an LDAP logical AND operator, the corresponding EID sets are merged using an SQL INTERSECT logical operator. If a pair of LDAP filter elements are subject to an LDAP logical NOT operator, the corresponding EID sets are merged using an SQL NOT IN logical operator. As will also be seen, these combination rules are applied recursively such that all LDAP elements

associated with a particular logical operator are processed into the SQL query. This recursive processing facilitates handling of even complicated LDAP queries having numerous layers of logical depth.

(Column 7, lines 39-58). Thus, *Corn* describes merging sets of EIDs “using a set of combination rules.” This portion of *Corn*, however, does not teach, suggest, or disclose “results associated with the one or more negative terms” or “results associated with the one or more positive terms” as recited in Claim 1. In addition, merely merging sets of EIDs, as described in *Corn*, does not teach, suggest, or disclose “collecting, *into a first list*, results associated with the one or more negative terms, and collecting, *into a second list*, results associated with the one or more positive terms” as recited in Claim 1. (Emphases added). Because the cited references fail to teach, suggest, or disclose this aspect of Claim 1, the cited references fail to support the rejection.

Second, the cited references fail to teach, suggest, or disclose “omitting from the second list any results that are in the first list” as recited in Claim 1. In the Office Action, the Examiner relies on *Lohman* for this aspect of Claim 1. (Office Action; page 5). *Lohman* describes a method for parallel processing of subtasks associated with a query. (Abstract; column 1, lines 42-59). The cited portion of *Lohman* describes duplicate elimination. (Column 5, lines 30-33). Specifically, the cited portion states:

Duplicate elimination (distinct) can be thought of as a special case of aggregation (with no aggregating functions); therefore, all of the parallelization decisions just described for aggregation apply to duplicate elimination as well.

(Column 5, lines 30-34). Thus, the cited portion of *Lohman* includes a cursory reference to “duplicate elimination.” Neither the cited portions of *Corn* or *Lohman* teach, suggest, or disclose the “first list” or the “second list” recited in Claim 1. Therefore, the cursory reference to “duplicate elimination” in *Lohman* does not teach, suggest, or disclose “omitting from the second list any results that are in the first list” as recited in Claim 1. Because the cited references fail to teach, suggest, or disclose this aspect of Claim 1, the cited references fail to support the rejection.

Third, the cited references fail to teach, suggest, or disclose “if the service query comprises a term having at least two NOT operators, deleting from the sum of terms a third-order term corresponding to the term having at least two NOT operators” as recited in Claim 31. In the Office Action, the Examiner relies on *Corn* for this aspect of Claim 31. (Office Action; page 16). In particular, the Examiner cites a flowchart (Figure 6B of *Corn*) as well as

the description in *Corn* that pertains to the flowchart. *Corn* explains that the flowchart illustrates an SQL generation algorithm. (Column 7, lines 62-64). The cited portion of *Corn* states:

If the LDAP filter element includes neither AND nor OR, the routine continues at step 92 to determine whether the NOT logical operator is present. If so, the routine continues at step 94 to add the NOT IN logical operator to the SQL expression being generated. The routine then continues at step 96 to enter the recursive call so that all associated subexpressions may be parsed through the algorithm in the manner previously described. Thus, at step 98, a test is performed to determine whether all subexpressions associated with the NOT operator have been processed. If so, the routine returns at step 100; otherwise, the routine loops back to step 96 and processes the next subexpression.

(Column 8, lines 40-50). Thus, the cited portion of *Corn* describes parsing subexpressions and, in some cases, adding the NOT IN logical operator to an SQL expression. This reference to parsing subexpressions, however, does not teach, suggest, or disclose “a term having at least two NOT operators” or “a third-order term corresponding to the term having at least two NOT operators” as recited in Claim 31. Furthermore, there is nothing in the cited portion of *Lohman* that teaches, suggests, or discloses “if the service query comprises a term having at least two NOT operators, *deleting from the sum of terms a third-order term* corresponding to the term having at least two NOT operators” as recited in Claim 31. (Emphasis added). Because the cited references fail to teach, suggest, or disclose this aspect of Claim 31, the cited references fail to support the rejection. For at least the foregoing reasons, Applicant respectfully requests reconsideration and allowance of Claims 1 and 31.

In rejecting Claims 9, 14, and 22, the Examiner employs the same rational used to reject Claims 1 and 31. Accordingly, for analogous reasons to those stated above with respect to Claims 1 and 31, Applicant respectfully requests reconsideration and allowance of Claims 9, 14, and 22.

Claims 2-5, 10, 15-18, 23, and 27-30 depend from independent claims shown above to be allowable. In addition, these claims recite further elements that are not taught, suggested, or disclosed by the cited references. For at least these reasons, Applicant respectfully requests reconsideration and allowance of Claims 2-5, 10, 13-18, 23, and 27-30.

**CONCLUSION**

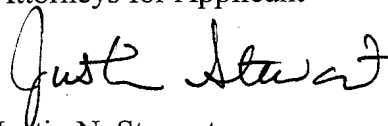
Applicant has made an earnest attempt to place this case in condition for allowance. For the foregoing reasons and for other reasons clearly apparent, Applicant respectfully requests reconsideration and full allowance of all pending claims.

If there are matters that can be discussed by telephone to further the prosecution of this Application, Applicant invites the Examiner to call the undersigned attorney at (214) 953-6755 at the Examiner's convenience.

Although no fees are believed due for this response, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

BAKER BOTTS L.L.P.  
Attorneys for Applicant

A handwritten signature in black ink, appearing to read "Justin N. Stewart".

Justin N. Stewart  
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Date: April 2, 2007

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